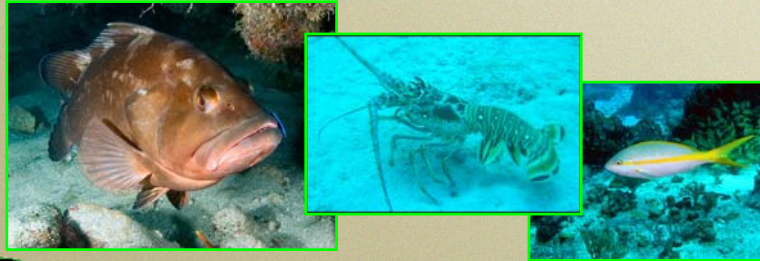


Marine Fisheries State-Federal Coordination Workshop

The Fishery Management Toolbox



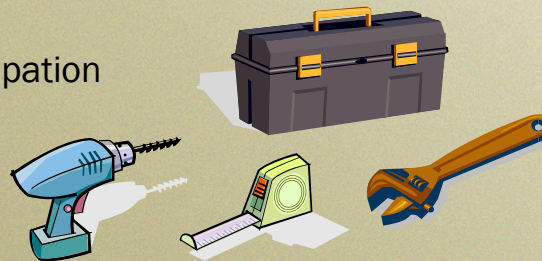
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Florida Fish and Wildlife Conservation Commission
Division of Marine Fisheries Management

Marine fisheries management has typically emphasized regulation of harvest as the means to sustain healthy populations of fish. This section will provide a general overview of the kinds of management strategies that both state and federal agencies employ.

Building a Successful Management Program

- Management Plan = Blueprint
 - Sets a goal
 - Establishes reference points
 - Allocates the resource among users
 - Recommends management actions
- Management Actions = Tools
 - Manage Catch
 - Manage Participation



In combination with periodic assessments of a stock, the management plan forms the basis or blueprint for managing. Federal plans as crafted by the Councils or NMFS include a management goal related to “maximum sustained yield”. Other reference points are set such as a minimum acceptable stock size. For federal management plans specific goals and reference points are required by law. FWC management plans are more flexible but for certain fisheries we establish goals, for example using “spawning potential ratio” (SPR) as a target for the breeding population size.

A management plan typically addresses allocation of harvest among the various fishing interests. It then identifies management actions, like closed seasons or bag limits, that ensure harvest levels meet the goals and allocations set forth in the plan.

The stock assessment and management plan serve as the blueprint. The management actions represent the tools in the tool box that are used to build and run a successful fishery. Harvest is controlled either through limiting the catch of each fisher, or by managing the total number of fishers who are participating in the harvest.

Ways to Manage Commercial Harvest

Quotas

- Annual limit
- Seasonal quotas
- Quotas by gear type
- Individual Fishing Quotas
- Community-based quotas



Because commercial fishing typically relies on the sale of large quantities of product, individual fishermen are each allowed to harvest a regulated amount of the total annual quota for the fishery. The total catch is managed by a quota or annual catch limit. Quotas take many forms:

Annual limit: a total number or pounds of fish may be caught each year. When the quota is reached the fishery is closed for the remainder of the year.

Seasonal quota: An annual quota is divided into periods (seasons or months). When the quota is reached in each period, the fishery is closed until the start of the next period. This tends to extend fishing opportunity throughout the year.

Quotas by type of fishing gear: A commercial harvest quota may be subdivided between gear types.

Individual Fishing Quotas: The total amount of fish allotted to the commercial fishery is subdivided among each participating fisherman. They may only catch up to their allotted share of the total quota. There are many ways “IFQ’s” may be established and managed but they typically require much closer monitoring of harvest than traditional quota management systems.

Community-based quotas: An extended version of IFQs where a fishing community or cooperative is established and given a share of the commercial harvest allocation. The group determines how to use their community share among their members or participants.

Ways to Manage Commercial Harvest

Catch/Effort Controls

- Size limits
- Trip limits
- Time/Area closures
- Gear limitations
- Limit licenses
- Use-it-or-lose-it
- Vessel monitoring
- Moratoria



In addition to controlling the total allowable harvest through quotas, the catch and effort of commercial fishermen may be managed with a variety of additional tools:

Size limits: Commercial and recreational size limits may differ for the same species, typically to address discard mortality.

Trip limits: To help control the rate of harvest each commercial fisherman may be restricted to landing a maximum number of fish or pounds per trip. In rare cases commercial harvest may be limited to a recreational bag limit.

Time/Area closures: Seasonal closures may target months when a species is spawning or otherwise vulnerable to overharvest. Area closures are implemented to prevent fishing in places where fish may aggregate in large numbers, be vulnerable to overharvest, or where gear may damage sensitive marine habitats or fish nursery areas.

Gear limitations: Certain types of gear (e.g., fish traps) may be strictly regulated or prohibited.

License limitation: the number of licenses or permits available to commercial fishermen may be capped.

Use-it-or-lose-it provisions: Effort may be reduced over time by retiring licenses that are not being used.

Vessel monitoring: GPS-type technology is being employed to monitor the movements and activity of fishing vessels on the water. VMS, as it's called, is a critical tool for managing Individual Fishing Quota programs.

Moratoria: Temporary harvest bans may be put in place to respond to rapidly changing conditions in a fishery.

Ways to Manage Recreational Harvest

Catch/Effort Controls

- Size limits
- Bag or vessel limits
- Time/Area closures
- Gear limitations
- Licensing
- Recreational quota (annual catch limits)



The tools commonly applied to recreational fishing include:

Size and Bag limits: The most common approach to managing recreational catch. These help protect juvenile or spawning-sized fish and limit each angler's catch. Sometimes the individual bag limit is reduced so much that a daily boat or "vessel" limit is applied.

Time/Area closures: Closures may target times or areas where fish are spawning or otherwise vulnerable to overharvest. They may also be implemented to minimize fishing impacts to sensitive marine habitats or fish nursery areas.

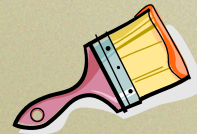
Gear restrictions: Usually implemented to reduce the effectiveness or success rate of anglers targeting a particular species.

Licensing requirements: Although typically there are no limits on the number of recreational licenses that may be issued, Florida requires most anglers to have a license to fish. This is not considered a major limitation on effort, since it is believed that most people who want to fish will buy a license. There are numerous exemptions to license requirements. In some cases special permits are required to harvest or keep a fish (Snook is an example).

Recreational quota: One of the recent changes to the Magnuson Stevens Fishery Conservation and Management Act is a requirement to implement "annual catch limits" for fishing activity in federal waters. This means that by 2011 all fish and invertebrates managed under a federal management plan will be required to have a separate annual catch limit assigned to recreational and commercial harvest. In effect, the recreational "annual catch limit" will be a quota controlling the amount of fish that can be harvested by this sector each year.

Broad-Brush Approaches

- Setting or adjusting allocations
- Setting goals for the fishery
- Limiting or eliminating a fishing sector
- Prohibiting harvest
- Marine Reserves or No-take zones
- Buy-Outs



There are also some broader restrictions that may be implemented to reduce commercial and recreational fishing impacts:

Setting or adjusting allocations: Management decisions determine how much of a harvest will be allowed for commercial vs. recreational use.

Setting goals for the fishery: The long term goal set for the fishery is an important tool controlling harvest. For example goals may be set to maximize the bag limit, or conversely, to create a trophy fishery that allows a very limited number of fish to be harvested.

Limiting or Eliminating a fishing sector: A decision may be made to restrict harvest to only one sector.

Prohibiting harvest: This action may be a temporary response to an emergency situation, or for an indefinite period to rebuild a fishery.

Marine Reserves or No-take Zones: Marine reserves (considered a type of marine protected area) may close a large area to most or all types of harvest or removal of living resources. These are typically applied to restore or protect sensitive ecological systems, or to limit harvest pressure.

Buy-Outs: This tool is typically used to phase out or eliminate a type of commercial fishing activity, while providing economic incentive or relief to the affected fishers.

Questions or Discussion?

UP NEXT: Options for Future Coordination
and Influencing

