

Science, Service, Stewardship



EXCESS HARVESTING CAPACITY IN
U.S. FISHERIES:
A Report to Congress

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Magnuson-Stevens Act Mandate

- A report on excess harvesting capacity in U.S. federally managed fisheries, mandated in MSA §312(b)(6), had two key requirements:
 - (1) To identify and describe the fisheries that are the most severe examples of excess harvesting capacity.
 - (2) To review and assess cost-effective and preferably industry-funded measures that reduce excess harvesting capacity.



DEFINITIONS: What do we mean by “harvesting capacity”?

- NMFS used an output-based definition of capacity. In other words, capacity is defined as an amount of harvests, and not in terms of numbers, length, size, or horsepower of the vessels.
- An output-based definition was selected for three reasons:
 - (1) Fisheries management deals with resource and harvest levels more than with inputs (note the MSRA mandate to establish annual catch limits),
 - (2) Input-based management (effort controls) have generally proven ineffective, and
 - (3) Capacity levels in virtually all other economic sectors are measured in outputs.
- Thus, harvesting capacity is “the maximum amount of fish that the fishing fleets can reasonably expect to catch”. By “reasonably”, NMFS refers to normal operating and resource conditions.



Excess Capacity and Overcapacity

- Excess capacity = harvesting capacity in excess of recent harvests, i.e., the fleet has the physical ability to harvest more than current harvests
- Overcapacity = harvesting capacity in excess of a management target (quota)
- An example: Capacity = 100, harvests = 80, and the TAC = 75:
 - Excess capacity is $100/80 = 1.25$, or 25%
 - Overcapacity is $100/75 = 1.33$, or 33%



Major Quantitative Findings

- The report to Congress assessed (1) excess capacity, (2) overcapacity, and (3) overharvests for fisheries, fleet sectors, and by species.
- Excess capacity and overcapacity rates varied considerably by fishery, fleet and species group.
- Almost half of the assessed fisheries (12 of 25) showed levels of excess capacity of 45% or more. Data limitations prevented NMFS from assessing capacity in all federally managed fisheries.
- About one-third of fisheries have overcapacity rates of 30% or higher.
- In some (but not all) fisheries with high rates of excess capacity and overcapacity, there was overharvest of quotas, overfishing and overfished stocks.



Top 20 Fisheries with Excess Harvesting Capacity (by region)

- NE multispecies
- Atlantic herring
- Monkfish
- Atlantic sea scallops
- Summer flounder, scup, and black sea bass
- Atlantic bluefish
- Mackerel, squid, and butterfish
- Surf clam and Ocean quahog
- Atlantic tilefish
- Atlantic deep sea red crab
- Atlantic tunas, sharks, and billfish
- Atlantic and Gulf of Mexico coastal migratory pelagic species
- Gulf of Mexico reef fish
- Southwest coastal pelagic species
- West Coast highly migratory species
- Pacific Coast groundfish
- Bering Sea and Aleutian Islands crab
- Pacific halibut
- Gulf of Alaska groundfish
- Bering Sea and Aleutian Islands groundfish



Are Excess Capacity and Overcapacity “Problems”?

- There is no easy or “one size fits all” answer to what we should do about excess capacity and overcapacity. Estimates of excess harvesting capacity must be used with extreme caution.
- Estimate limitations:
 - Based on 2004 data only
 - Do not reflect recent changes in resource conditions
 - Are hard to interpret in multispecies fisheries
 - May be distorted by discards
 - Could not be done in all regions or for all federally managed fisheries.
- The MSA does not mandate that we manage capacity.
- Nonetheless, high rates of excess capacity and overcapacity are signs of ineffective management, and are symptomatic of fisheries that are not generating maximum economic benefits.



What Can We Do About Excess Harvesting Capacity?

EXCESS CAPACITY MAY BE ADDRESSED FOUR WAYS:

- Limited access privilege programs, especially programs with transferable harvest shares. This is the preferred approach.
- Industry-funded buybacks, which allow for planning and carefully negotiated capacity targets. Generally not an effective stand-alone approach.
- License limitation programs, which limit numbers of participants but do not effectively constrain capacity.
- Conventional management (quotas, closures, gear restrictions, etc.), which focuses on mitigating harm rather than addressing causes.