

*Special Report No. 33*  
*of the*

**ATLANTIC STATES  
MARINE FISHERIES  
COMMISSION**



**Acronyms, Abbreviations and  
Technical Terms Used in  
ASMFC Fishery Management Programs**

**October 1994**

**ACRONYMS, ABBREVIATIONS, AND TECHNICAL TERMS USED IN  
ASMFC FISHERY MANAGEMENT PROGRAMS**

By

**MANAGEMENT AND SCIENCE COMMITTEE**

**Atlantic States Marine Fisheries Commission  
1776 Massachusetts Avenue, NW, Suite 600  
Washington, DC 20036**

**Special Report No. 33**

A publication of the Atlantic States Marine Fisheries Commission  
pursuant to the United States Fish and Wildlife Service  
Cooperative Agreement Number 14-48-0009-93-1256



**October 1994**

## CONTENTS

INTRODUCTION .....	1
ABBREVIATIONS AND ACRONYMS .....	2
TECHNICAL TERMS .....	4
BIBLIOGRAPHY .....	20
ASMFC SPECIES LIST .....	21

## INTRODUCTION

Management of Atlantic Coast commercial and recreational fisheries has become increasingly complex during the last 10-20 years. Enactment of the Magnuson Fishery Conservation and Management Act in 1976 (PL 94-265) created a structured fishery management environment, with defined processes, timelines, greater public participation, and, most important, fishery management plans with goals, objectives, analyses, and strategies. The existing Atlantic States Marine Fisheries Commission (ASMFC) State-Federal Fishery Management Program was also a planning activity, but there was little formal structure, and plans and planning procedures varied widely. The current Interstate Fisheries Management Program of the ASMFC developed from the State-Federal program in 1980, providing a structure with plans, amendments, reviews, etc. which has gradually become more formalized.

The federal Magnuson Act system blossomed during the 1980s, generating numerous plans, significant improvements in the science of fisheries population dynamics, and a whole vocabulary of acronyms, abbreviations, and technical terms used by a growing cadre of scientists, administrators, fishermen, and citizens.

Enactment of the Atlantic Coastal Fisheries Cooperative Management Act late in 1993 provides a statutory foundation for the Commission's Interstate Fisheries Management Program. This program will constitute the basis for management of coastal migratory fish stocks along the Atlantic Coast for the foreseeable future.

Several reports have been published defining various fisheries terms. The Management and Science Committee, responding to a request of the ASMFC, examined these reports (see the bibliography) and concluded they did not meet the needs of the Commission. Consequently, the Committee has prepared this document for the Commission, as well as for others interested in fisheries management along the Atlantic Coast. Many of the terms and definitions contained in this publication were adapted from the reports listed in the bibliography.

## ABBREVIATIONS AND ACRONYMS

A	Annual mortality
ABC	Allowable biological catch
ACFCMA	Atlantic Coastal Fisheries Cooperative Management Act
AP	Advisory panel
ASMFC	Atlantic States Marine Fisheries Commission
BRD	Bycatch reduction device
ComFIN	Commercial fisheries information network
CPUE (C/E)	Catch-per-unit-of-effort
CSP	Cooperative Statistics Program
DAH	Domestic annual harvest
DOC	Department of Commerce
DOI	Department of the Interior
EA	Environmental assessment
EEZ	Exclusive Economic Zone
EIS	Environmental impact statement
EPA	U.S. Environmental Protection Agency
EPR	Eggs-per-recruit
ESA	Endangered Species Act
FED	Fish excluder device
F	Fishing mortality
FL	Fork length
FMP	Fishery management plan
FWS	Fish and Wildlife Service
GLM	General linear model
GSI	Gonosomatic index
IJF	Interjurisdictional fisheries
ISFMP	Interstate Fisheries Management Program
ITQ	Individual transferable quota
IWP	Internal waters processing
JAI	Juvenile abundance index
JV	Joint venture
K	Condition factor
M	Natural mortality
MAFMC	Mid-Atlantic Fishery Management Council
MARFIN	Marine Fisheries Initiative
MFCMA	Magnuson Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistics Survey
MSC	Management and Science Committee
MSP	Maximum spawning potential
MSY	Maximum sustainable yield



MT	Metric tonne
NMFS	National Marine Fisheries Service
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEMFIS	Northeast Marine Fisheries Information System
NOAA	National Oceanic and Atmospheric Administration
OY	Optimum yield
PDT	Plan development team
PRT	Plan review team
q	Catchability coefficient
RD	Regional director
RecFIN	Recreational fisheries information network
S	Survival rate
SAC	Stock assessment committee
SAFMC	South Atlantic Fishery Management Council
SAW	Stock assessment workshop
SEAMAP	Southeast Area Monitoring and Assessment Program
SEFSC	Southeast Fisheries Science Center
SL	Standard length
SMZ	Special management zone
SPR	Spawning potential ratio
SSB	Spawning stock biomass
SSBR	Spawning stock biomass per recruit
TAC	Total allowable catch
TALFF	Total allowable level of foreign fishing
TC	Technical committee
TED	Turtle excluder device
TIP	Trip interview program
TL	Total length
VPA	Virtual population analysis
YOY	Young of the year
YPR	Yield per recruit
Z	Total instantaneous mortality rate
$\mu$	Exploitation rate

## TECHNICAL TERMS

<b>Absolute abundance</b>	The total number of fish in a stock, a value which is very rarely known; instead, relative estimates are calculated by various means.
<b>Adaptive management</b>	A strategy under which rules may be changed annually based on status of the stock as shown by research and monitoring of the stock and fisheries.
<b>Advisory Panel</b>	A group of interested and knowledgeable persons convened by the ASMFC or a regional fishery management council to assist in development of a FMP or an amendment to a FMP.
<b>Age frequency or age structure</b>	The percent or number of fish of each age group present in a stock or sample.
<b>Allowable biological catch (ABC)</b>	A scientific estimate of the amount of catch from a stock which may be taken in a year; usually given as a range of values.
<b>Anadromous</b>	Fish which spawn in freshwater, but spend most of their life in salt or brackish water.
<b>Angler</b>	A fisherman who uses hook-and-line fishing gear, generally, but not always, a recreational (sport) fisherman.
<b>Annual mortality (A)</b>	(see Mortality rate).
<b>Aquaculture</b>	Raising aquatic organisms under conditions which are at least partially controlled.
<b>Atlantic States Marine Fisheries Commission (ASMFC)</b>	The agency created by the Atlantic States Marine Fisheries Compact, approved by the U.S. Congress in 1942, to foster cooperation in marine fisheries management among the Atlantic Coast states.
<b>Bag limit (creel limit)</b>	The maximum number of individual fish which a single person or group of persons can land from a fishing trip or within a specified time period (see Possession limit).
<b>Benthic</b>	Refers to organisms which live at or in the bottom (see Pelagic, Demersal).
<b>Biological reference point</b>	Defined fishing mortality rates used to evaluate condition of a stock relative to overfishing (see Mortality rate).
<b>Biomass</b>	The total weight of a stock of fish or of a defined sub-unit of a stock, such as spawning females (see Spawning stock biomass).



<b>Bycatch</b>	That portion of a catch taken incidentally to the targeted catch because of non-selectivity of fishing gear to either species or size differences. Some bycatch may be retained, but most is usually discarded.
<b>Bycatch reduction device (BRD)</b>	Modifications made to fishing gear to lessen bycatch (see Fish excluder device, Turtle excluder device).
<b>Catadromous</b>	Fish which spawn in saltwater but live most of their life in freshwater.
<b>Catch</b>	The total number or weight of fish captured, including both fish which are retained and discarded.
<b>Catchability coefficient (q)</b>	A measure of the susceptibility of a given stock, or portion of a stock, to being caught by a specific gear.
<b>Catch curve</b>	A graph of the numbers of fish of different ages caught from a stock, generally showing decreasing numbers in older ages.
<b>Catch-per-unit-of-effort (CPUE or C/E)</b>	The catch taken by a given amount of fishing gear during a given period of time. Over time, CPUE data often provide an indication of trends in abundance of a fish stock.
<b>Charter boat</b>	A boat hired by a group of people (usually 6 or less), generally for a single recreational fishing trip (see Headboat).
<b>Coastal pelagic</b>	Refers to fish which migrate along the coast, generally near the shore, and live principally up in the water column rather than in association with the bottom.
<b>Cod end</b>	The bag at the end of a trawl net in which fish are held.
<b>Cohort</b>	A group of fish spawned during a given period, usually a single year.
<b>Cohort analysis</b>	(see Virtual population analysis).
<b>Commercial Fisheries Information Network (ComFIN)</b>	A cooperative state-federal effort among marine fisheries agencies in the Southeast to improve collection and management of commercial fisheries statistics.
<b>Commercial fisherman</b>	A person who sells, barter, or receives compensation for any or all of his/her harvest.
<b>Commercial fishing</b>	Attempting to catch fish in order to receive compensation for the harvest.

<b>Compensatory growth</b>	An increase in growth shown by fish under certain conditions, apparently in response to those conditions. Individuals of a cohort which is small in number may be larger on average than individuals from a more abundant cohort at the same age (see Depensatory growth).
<b>Condition factor (K)</b>	A measurement of the general health of a fish calculated from the relationship of length and weight.
<b>Continental shelf</b>	The seabed from the ocean beach out to a depth of 200 meters (approximately 100 fathoms or 600 feet). Beyond this depth, the seabed usually drops off rapidly.
<b>Cooperative Statistics Program (CSP)</b>	A cooperative state-federal program for collecting and managing commercial fisheries-dependent data from North Carolina to Texas, Puerto Rico, and the U.S. Virgin Islands (see NEMFIS).
<b>Council</b>	One of eight regional groups established under Section 302 of the MFCMA to prepare and oversee FMPs for fisheries conducted principally within the EEZ.
<b>Crustacean</b>	Animals without backbones, with jointed limbs, and a hard exoskeleton made of chitin. This group includes shrimp, crabs, and lobsters.
<b>Demersal</b>	Refers to organisms which live at or near, but not in, the bottom (see Benthic, Pelagic).
<b>Department of the Commerce (DOC)</b>	The federal department housing NOAA, which includes NMFS with its responsibilities for management of living marine resources.
<b>Department of the Interior (DOI)</b>	The federal department housing the FWS, which shares (with DOC) federal responsibility for fisheries resources, concentrating on fresh water and anadromous species.
<b>Depensatory growth</b>	A decrease in growth shown by fish under certain conditions, apparently in response to those conditions. Individuals of a cohort which is large in number may be smaller on average than individuals from a less abundant cohort at the same age (see Compensatory growth).
<b>Derby fishing</b>	Accelerated fishing effort, usually at the beginning of a fishing season; typical of an open access fishery under simple quota management.

<b>Fishing power</b>	The ability of a given fishing gear to catch fish. Factors which increase efficiency (such as larger nets or increased horsepower in a trawl fishery) increase fishing power
<b>Forage</b>	(see Prey).
✓ <b>Fork length (FL)</b>	The distance from the tip of the lower jaw to the tip of the middle of the tail fin for fish with forked tails.
✓ <b>Fyke (Hoop) net</b>	A fishing gear consisting of stationary conical sections into which fish swim and become entrapped.
<b>General linear model (GLM)</b>	A statistical approach used to predict changes in a given biological factor based on another biological factor or factors.
<b>Gill net</b>	A flat net suspended vertically in the water used to capture fish which entangle themselves in the net, usually by the forward part of the body near the gills. Gill nets are quite selective for certain sizes of fish and can be operated by drifting with the current, anchoring to the bottom, hanging from stakes, or encircling an area or school of fish.
<b>Gonosomatic index (GSI)</b>	The ratio of the weight of a fish's reproductive organs to its total weight; used to indicate spawning period or spawning condition.
<b>Groundfish</b>	Finfish which live at or near the bottom (see Demersal).
<b>Growth</b>	Increase in length or weight of an individual fish over time; increase in numbers or biomass of a fish stock over time.
<b>Harvest</b>	The number or weight of fish caught and kept for immediate use (bait, food) or for landing.
<b>Headboat</b>	A vessel which charges a separate fee for each recreational fisherman (usually more than 6) on a fishing trip.
<b>Incidental catch</b>	(see Bycatch).
<b>Individual transferable quota (ITQ)</b>	A form of controlled access in which individual persons or vessels receive a property right to a share or specific allocation of the total expected harvest of fish which they can buy, sell, lease, etc.
<b>Industrial fishery</b>	A fishery which harvests fish for uses other than for human food.

<b>Intercept fishery</b>	Harvest of migratory fish at a geographic location on the migratory route prior to the location of traditional harvest.
<b>Interjurisdictional fisheries (IJF)</b>	Refers to fisheries which occur in, and are regulated by, multiple governmental jurisdictions. Also refers to the Interjurisdictional Fisheries Act (16 USC 4100 et. seq.).
<b>Internal Waters Processing (IWP)</b>	Processing on board foreign vessels located in State territorial waters of fish harvested by U.S. vessels, as provided in Section 306 of MFCMA.
<b>Interstate Fisheries Management Program (ISFMP)</b>	The ASMFC program for cooperative preparation and implementation of interstate FMPs for coastal fisheries.
<b>Instantaneous mortality</b>	(see Mortality).
<b>Joint venture</b>	A commercial fishing enterprise under the MFCMA between United States' companies and foreign participants, including fishing and processing activities.
<b>Juvenile</b>	A young fish, usually resembling an adult in appearance, but which has not yet become sexually mature; usually applied to fish less than one year old (see Young-of-year).
<b>Juvenile abundance index (JAI)</b>	A measure of the relative abundance of the juveniles of a stock which may serve as an indication of reproductive success. For some species, the JAI may predict future adult abundance.
<b>Landings</b>	The number or weight of fish brought to shore.
<b>Limited entry</b>	A fishery management system which restricts the number of participants (individuals, vessels) in a fishery. License limits and ITQs are two types of limited entry, which is also called "controlled access."
<b>Magnuson Fishery Conservation and Management Act (MFCMA)</b>	The federal law (PL 94-265) enacted in 1976 which established the federal fishery management system for the EEZ which includes regional councils, FMPs, and federal rules.
<b>Management and Science Committee (MSC)</b>	The principal scientific advisory body of the ASMFC; comprised of representatives from member states, NMFS, and the USFWS.
<b>Marine Fisheries Initiative (MARFIN)</b>	A federally funded marine fisheries research program in the southeast United States administered by NMFS.

<b>Marine Mammal Protection Act (MMPA)</b>	A federal law enacted in 1972 which protects marine mammals and provides a regulatory system concerning the interactions of marine mammals and commercial fisheries.
<b>Marine Recreational Fisheries Statistics Survey (MRFSS)</b>	A survey conducted by NMFS and cooperating state agencies for the purpose of estimating the nation's marine recreational fisheries catch, effort, participation, and other information.
<b>Maximum spawning potential (MSP)</b>	The estimated female spawning stock biomass or egg production in the absence of fishing. A percentage of this value (%MSP) can be used as a measure of the health of a stock.
<b>Maximum sustainable yield (MSY)</b>	The largest catch, on average, which can be taken from a stock over time under existing environmental conditions without affecting the reproductive capacity of the stock.
<b>Meristics</b>	Physical characteristics, usually counts of different body parts (such as number of spines, finrays, scales) taken from individual fish; used to separate groups of fish into populations or races (see morphometrics).
<b>Mesh size</b>	Measurement of the size of the open spaces in a net. Measurement is usually taken while the net is stretched under some specified tension. The measurement can be taken in several ways: inside the mesh, inside of one mesh to the inside of the next mesh, an average of a stated number of meshes, etc.
<b>Metric tonne (mt)</b>	1,000 kilograms or 2,204.6 pounds.
<b>Mid-Atlantic Fishery Management Council (MAFMC)</b>	One of the regional fishery management councils established under Section 302 of MFCMA and responsible for the EEZ fisheries from Virginia through New York.
<b>Model</b>	A mathematical formula or formulae which describe relationships within a stock or fishery.
<b>Mollusk</b>	An animal without a skeleton and with a single or two-part shell made of calcium carbonate; including clams, oysters, scallops, mussels, squid, and conchs.
<b>Moratorium</b>	A restriction which totally closes a fishery, prohibiting fishing and harvest. A license moratorium would prohibit additional fishermen or vessels from entering a fishery.

## Morphometrics

Physical characteristics, generally relationships among various parts of fish (such as eye size or fin location relative to fish length) used to separate groups of fish into populations or races (see meristics).

## Mortality rate

The rate at which fish die. Mortality can be expressed as annual percentages or instantaneous rates (the fraction of the stock which dies within each small amount of time). Fishery scientists utilize several different types of mortality to evaluate status of fish stocks, and some serve as biological reference points (Instantaneous rates are used in most stock assessments):

**Annual mortality (A)** - The percentage of a fish stock which dies from all causes during a year.

**Fishing mortality (F)** - The instantaneous rate at which fish in a stock die because of fishing. There are several kinds of fishing mortality rates; some of the more common include the following:

**$F_{max}$**  - The rate of fishing mortality which maximizes the weight taken from a single cohort over its entire life.

**$F_{max}$**  - The rate of fishing mortality which maximizes the weight of the harvest within a year.

**$F_{0.1}$**  - The rate of fishing mortality at which an increase in catch for a given increase in effort is only 10% of what it would be from an unfished stock.

**$F_{coll}$**  - The rate of fishing mortality which, if continued over time, would cause the stock to collapse.

**Natural mortality (M)** - The instantaneous rate at which fish die from all causes other than harvest. This rate has traditionally included unmeasured bycatch mortality, but as research has documented bycatch, it is increasingly included in "F". Usually "M" is an assumption or estimate from maximum age data or the value used for other species with a similar life history strategy. Natural mortality can rarely be measured directly.

<b>Nordmore grate</b>	A rigid or semi-rigid finfish excluder device, secured in a trawl forward of the cod end, with bar spacing of one inch or less; use is required in the northern shrimp fishery.
<b>Northeast Fisheries Science Center (NEFSC)</b>	The Northeast regional research facilities of NMFS, includes laboratories located from Virginia through New England, with headquarters in Woods Hole, Mass.
<b>Northeast Marine Fisheries Information System (NEMFIS)</b>	A state-federal cooperative program for collecting and managing commercial fisheries-dependent data from Virginia through Maine (see CSP).
<b>Nursery area</b>	A portion of the habitat used by a stock in which the young spend most of their initial growing season. Nursery areas for most important Atlantic Coast stocks are located in estuaries.
<b>Open access fishery</b>	A fishery in which anyone can participate as long as those individuals possess or can acquire the necessary fishing gear; licenses/permits are available without restriction.
<b>Optimum yield (OY)</b>	The catch from a stock which will provide the greatest overall benefits. This value is usually determined by modifying MSY by relevant social, economic, and environmental factors.
<b>Overcapitalization</b>	A condition which exists when there are more vessels and/or gear in a fishery than are needed to maintain current catch levels or profitability.
<b>Overfishing</b>	Harvesting at levels which affect the potential yield from a stock and/or its reproductive capacity. There are two kinds of overfishing:  <u>growth overfishing</u> - harvesting fish at a size smaller than the size which results in maximum yield per recruit.  <u>recruitment overfishing</u> - harvesting fish at a rate at which the stock cannot replace itself.
<b>Pelagic</b>	Refers to organisms which live up in the water column rather than in association with the bottom (see Coastal pelagic, Demersal, Benthic).
<b>Plan development team (PDT)</b>	A group of persons who are knowledgeable concerning the scientific facts and fishery management issues concerning a designated fish stock who are convened to prepare an FMP or amendment.

<b>Quota</b>	The maximum weight or number of fish which can legally be landed within a stated time period. A quota can apply to an entire fishery or to an individual vessel or fisherman.
<b>Recreational Fisheries Information Network (RecFIN)</b>	A cooperative state-federal effort among marine fisheries agencies to improve collection and management of marine recreational fisheries statistical information.
<b>Recoupment</b>	Ability of fishermen to make up for losses in harvest caused by regulations through actions such as fishing longer, increasing gear, or improving efficiency.
<b>Recreational fisherman</b>	Any person who catches or attempts to catch aquatic organisms for personal use, but not for sale, barter, or other compensation.
<b>Recruit</b>	An individual fish which has entered a defined group through growth, spawning, or migration, such as those fish above the minimum legal size (fishable stock) or which are sexually mature (spawning stock).
<b>Recruitment</b>	A measure of the weight or number of fish which enter a defined portion of a stock, such as the fishable stock or the spawning stock.
<b>Regional Director (RD)</b>	The principal federal officer of the NMFS and USFWS regional organizations.
<b>Relative abundance</b>	An index measure derived from surveys and used to compare changes in catches of various species over time. Increases and decreases in indices are interpreted as increases and decreases in the segment of the stock being sampled.
<b>Seine</b>	A type of net which gathers its catch as it is pulled through the water, either encircling the catch or bringing the catch ashore on a beach or shoal.
<b>Selectivity</b>	The ability of a fishing gear to catch fish of a certain size or species. Gill nets and pots can be quite selective, while seines and trawls usually are not very selective.
<b>Shellfish transport</b>	Movement of shellfish (mollusks and crustaceans) by man between jurisdictions for purposes of culture or introduction to new waters.
<b>Size distribution</b>	The number or percentage of fish of different size groups in a stock or sample.



<b>Slot limit</b>	Length limits in which fish smaller and/or larger than a specified size range may or may not be retained by fishermen. The protected size range usually includes fish which are especially valuable to maintenance or recovery of the stock, such as the size of the most productive spawners.
<b>South Atlantic Fishery Management Council (SAFMC)</b>	One of the regional fishery management councils established under Section 302 of MFCMA and responsible for the EEZ fisheries from North Carolina through the east coast of Florida.
<b>Southeast Fisheries Science Center (SEFSC)</b>	The Southeast regional research facilities of NMFS, including laboratories located from Texas through North Carolina, with headquarters in Miami, Fla.
<b>Special management zone (SMZ)</b>	An area, generally around an artificial reef, where restrictive fishery regulations are enforced to protect the fishery stocks of that area.
<b>Spawner-recruit relationship</b>	The concept that the number or weight of young (or recruits) is dependent on the number or weight of the spawning stock.
<b>Spawning potential ratio (SPR)</b>	See Maximum spawning potential (MSP).
<b>Spawning stock biomass (SSB)</b>	The total weight of fish which are sexually mature; generally pertaining only to females.
<b>Spawning stock biomass per recruit (SSBR)</b>	An estimate of the probable lifetime contribution to the spawning stock biomass of an individual recruit.
<b>Southeast Area Monitoring and Assessment Program (SEAMAP)</b>	A cooperative state-federal program which collects and manages fishery-independent data used to assess the status of important fishery stocks and their environment in the Southeast Region of NMFS.
<b>Standard length (SL)</b>	The length of a fish measured from the tip of the snout to the end of the vertebral column. This measurement is most often used for larval fish.
<b>Stock</b>	A group of fish of the same species which behave (migrate, spawn) as a unit and are genetically homogeneous.
<b>Stock assessment</b>	An evaluation of a stock, including age and size composition, reproductive capacity, mortality rates, stock size, and recruitment.

<b>Stock assessment workshop (SAW)</b>	A cooperative stock assessment activity in which scientists from various agencies evaluate the status of fish stocks important principally in the Northeast Region of NMFS.
<b>Survival (S)</b>	The proportion of fish alive at the beginning of a time period (usually a year) compared to those alive at the beginning of the previous time period. This fractional term, when added to annual mortality (A), will equal one (see Mortality).
<b>Tailbag</b>	(see Cod end).
<b>Technical committee (TC)</b>	A group of scientists (experts) brought together to aid in preparation of ASMFC FMPs.
<b>Territorial Sea</b>	Generally, the area from the low tide line of the ocean beach out to a point three nautical miles offshore in which states have the principal fisheries jurisdiction.
<b>Total allowable catch (TAC)</b>	The annual catch from a stock recommended by a management authority, based on the ABC.
<b>Total allowable level of foreign fishing (TALFF)</b>	The maximum amount of catch from a given stock which may be allocated for harvest by non-U.S. vessels under a Magnuson Act FMP.
<b>Total length (TL)</b>	The length of a fish measured from the tip of the lower jaw to the tip of the longest ray of the tailfin.
<b>Trap</b>	(See Pot, Pound net).
<b>Trawl</b>	A conical net towed through the water behind a fishing vessel, used principally to catch shrimp and finfish. This term also refers to a series of lobster pots attached to a common line and buoy.
<b>Trip interview program (TIP)</b>	A cooperative state-federal fishery-dependent sampling activity conducted in the Southeast Region of NMFS, concentrating on collection of fisheries and biological data from the reef fish and coastal pelagics fisheries.
<b>Trip limit</b>	The amount of fish which may be retained by individuals or on board a vessel as a result of single fishing trip.

<b>Turtle excluder device (TED)</b>	A panel of large mesh webbing (soft TED) or a metal grid (hard TED) installed in a trawl net to direct sea turtles out of the net. Because a TED may also reduce finfish bycatch, it has also been called a "trawl efficiency device" (see Bycatch reduction device, Fish excluder device).
<b>Virgin stock</b>	A stock which is not fished by humans. Changes in stock size are related only to environmental conditions and natural mortality.
<b>Virtual population analysis (VPA)</b>	A method of estimating stock size through examination of sizes of individual age classes (cohorts), growth, and mortality rates.
<b>Von Bertalanffy growth model</b>	A growth model which mathematically describes the growth parameters, such as maximum size, of different species of fish.
<b>Year class</b>	All of the individuals collectively of a given stock spawned or hatched in the same year.
<b>Yield per recruit (YPR)</b>	The expected yield in weight for a single fish or year class over the life of the fish or year class.
<b>Young-of-year (YOY)</b>	An individual fish during its first year; generally equivalent to a juvenile.
<b>Z</b>	(see Mortality rate).

## BIBLIOGRAPHY

- Center for Marine Conservation. 1993. Fish for the future: a citizen's guide to federal marine fisheries management. Ctr. for Mar. Conserv., Washington, D.C., 142 p.
- Conservation and Utilization Division, Northeast Fisheries Center. 1991. Status of the fishery resources of the northeastern United States for 1990. NOAA Tech. Memo. NMFS-F/NEC-81, 130 p.
- Environmental Protection Agency. 1991. A citizens guide to fish population analysis. EPA, Ches. Bay Program.
- Roberts, K.J., J.W. Horst, J.E. Roussel, and J.A. Shephard. 1991. Defining fisheries a user's glossary. Louisiana Sea Grant College Program, Louisiana State Univ., Baton Rouge, La., 21 p.
- National Marine Fisheries Service. 1992. Our living oceans. U.S. Dept. Commerce, NOAA, NMFS, NOAA Tech. Memo. NMFS-F/SPO-2, 148 p.

ASMFC SPECIES LIST

Official common name	Species name	Other common names
Alewife	<i>Alosa pseudoharengus</i>	river herring, big eye herring, forerunner
American eel	<i>Anguilla rostrata</i>	eel
American lobster	<i>Homarus americanus</i>	northern lobster
Atlantic croaker	<i>Micropogonias undulatus</i>	hardhead
Atlantic herring	<i>Clupea harengus</i>	sea herring
Atlantic menhaden	<i>Brevoortia tyrannus</i>	mossyback, pogy, bunker, bugfish, fatback, alewife, shad
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>	
Black sea bass	<i>Centropristis striata</i>	willy, black willy, blackfish
Blueback herring	<i>Alosa aestivalis</i>	glut, blue, or summer herring
Bluefish	<i>Pomatomus saltatrix</i>	blue, snapper blue, tailor blue, chopper blue
Blue crab	<i>Callinectes sapidus</i>	blue claw crab, hard crab, jimmy (male), sook (female)
Black drum	<i>Pogonias cromis</i>	
Brown shrimp	<i>Penaeus aztecus</i>	summer shrimp, hopper
Hard clam	<i>Mercenaria mercenaria</i>	quohog, quahog
Mullet - white striped	<i>Mugil curema</i> <i>Mugil cephalus</i>	jumper jumping mullet
Northern shrimp	<i>Pandalus borealis</i>	Maine shrimp, pink shrimp
Pink shrimp	<i>Penaeus duorarum</i>	spotted shrimp
Rainbow smelt	<i>Osmerus mordax</i>	
Red drum	<i>Sciaenops ocellatus</i>	channel bass, redfish, red bass, puppydrum, spottail bass, beardless drum
Scup	<i>Stenotomus chrysops</i>	porgy
Shad, American	<i>Alosa sapidissima</i>	white shad, skim, buck (male), roe (female), downrunners
Shad, hickory	<i>Alosa mediocris</i>	hickory jack, skipjack, buck jack, roe jack
Spanish mackerel	<i>Scomberomorus maculatus</i>	

Official common name	Species name	Other common names
Spot	<i>Leiostomus xanthurus</i>	lafayette, yellowfin spot, yellowtail, white perch, Norfolk spot
Spotted seatrout	<i>Cynoscion nebulosus</i>	speckled weakfish, winter trout, speckled squeteague, speck, speckled trout, spotted trout, salmon trout
Striped bass	<i>Morone saxatilis</i>	rockfish, rock, striper, bass
Southern flounder	<i>Paralichthys lethostigma</i>	
Summer flounder	<i>Paralichthys dentatus</i>	flake, plaice
Winter flounder	<i>Pleuronectes americanus</i>	blackback, lemon sole
Tautog	<i>Tautoga onitis</i>	blackfish, chub, black porgy, saltwater chub
Weakfish	<i>Cynoscion regalis</i>	squeteague, grey trout, seatrout, summer trout, yellowmouth trout
White shrimp	<i>Panaeus setiferus</i>	greentail